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THE JOURNAL OF PHILOSOPHY

VOL. LIII, NO. 9: APRIL 26, 1956

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PUBLISHED FORTNIGHTLY

BY THE

JOURNAL OF PHILOSOPHY, INC.

THE JOURNAL OF PHILOSOPHY

FOUNDED BY FREDERICK J. E. WOODBRIDGE AND WENDELL T. BUSH

EDITORS: Herbert W. Schneider, John H. Randall, Jr., Ernest Nagel.

MANAGING EDITOR: Emerson Buchanan.

Communications to the editors should be addressed to the Managing Editor, 713 Philosophy Hall, Columbia University, New York 27, N. Y. Subscriptions and advertisements should be sent to THE JOURNAL OF PHILOSOPHY, 713 Philosophy Hall, Columbia University, New York 27, N. Y. The annual subscription price (twenty-six numbers) is $5.25. The price of single numbers is 35 cents, double numbers, 60 cents.

THE JOURNAL OF PHILOSOPHY is owned by the Journal of Philosophy, Inc., and published fortnightly at Prince and Lemon Sts., Lancaster, Pa. Editorial Office: 713 Philosophy Hall, Columbia University, New York 27, N. Y. President, Albert G. Redpath; Vice President, John H. Randall, Jr.; Treasurer, Frederick A. Dewey; Secretary, Ernest Nagel.

Entered as second class matter, March 18, 1921, at the Post Office at Lancaster, Pa., under Act of Congress of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in paragraph (d-2), section 34.40, P. L. & R. of 1948, authorized March 11, 1952.

PUBLICATIONS

FOR SALE AT

THE JOURNAL OF PHILOSOPHY INC.

515 W. 116th STREET NEW YORK 27, N. Y.

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VOLUME LIII, No. 9 APRIL 26, 1956

THE JOURNAL OF PHILOSOPHY

HAS RUSSELL PROVED NAIVE REALISM SELF-CONTRADICTORY?

RUSSELL has created a new argument said to provide at once both a crushing refutation of naive realism and a strong defense of the causal theory of perception. It is highly original. It is delightfully subtle. Besides, it is interwoven with a number of important elements fundamental to his philosophy which by consideration of it are brought into review. Moreover, Russell has set forth his new argument in his principal philosophical treatises since 1927. Yet no one has noticed this new and fascinating argument, least of all estimated it, except Professor Albert Einstein, who has expressed great admiration for it.[1]

I wish here first to indicate the principal features of Russell's new argument and then to determine its merit.

I

One of Russell's ablest expressions of his new argument against naive realism and for the causal theory of perception is presented in the following passage:[2]

> Scientific scripture, in its most canonical form, is embodied in physics (including physiology). Physics assures us that the occurrences which we call "perceiving objects" are at the end of a long causal chain which starts from the objects, and are not likely to resemble the objects except, at best, in certain very abstract ways. We all start from "naive realism," i.e., the doctrine that things are what they seem. We think that grass is green, that stones are hard, and that snow is cold. But physics assures us that the greenness of grass, the hardness of stones, and the coldness of snow, are not the greenness, hardness, and coldness that we know in our own experience, but something very different. The observer, when he seems to himself to be observing a stone, is really, if physics is to be believed, observing the effects of the stone upon himself. Thus science seems to be at war with itself; when it most means to be objective, it finds itself plunged into subjectivity against its will. *Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore naive realism, if true, is false;*

[1] Einstein, "Remarks on Bertrand Russell's Theory of Knowledge," in *The Philosophy of Bertrand Russell*, ed. by Paul Arthur Schilpp (Evanston: The Library of Living Philosophers, Inc., 1946), pp. 281–283.

[2] Russell, *An Inquiry Into Meaning and Truth* (New York: W. W. Norton & Co., Inc., 1940), pp. 14–15. Italics are mine.

therefore it is false. And therefore the behaviourist, when he thinks he is recording observations about the outer world, is really recording observations about what is happening in him.

The italicized sentences state without details and in a manner that is only seemingly paradoxical the abstract structure of the argument which we are to examine.

Preliminary to an examination of this argument, its main features, which make it at once an original and significant argument, are to be remarked. What is its logical structure? What conclusions are said to follow from these premises? How much is asserted in its premises? And what kind of argument is it?

Let us at the outset temporarily ignore the last sentence of the argument, expressing the second conclusion, which is an assertion of the causal theory of perception, and concentrate attention first upon the two previous sentences, for they indicate the abstract structure of the argument in starkest economy:

Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore naive realism, if true, is false; therefore it is false.

The logical structure of this argument may be exhibited by representing the doctrine of naive realism by "N" and that of physics (including physiology) by "P" and then skeletonizing the argument as follows:

1. $N \supset P$	Premise
2. $P \supset \sim N$	Premise
3. $N \supset \sim N$	From 1 and 2 and Syllogism
4. $\sim N$	From 3 and Principle of the *reductio ad absurdum*.[3]

Obviously this is the logical pattern that Russell intends to follow in this argument. Obviously, too, if we assume that the abbreviations and symbolic expressions employed retain a constant meaning throughout the argument, the logic is impeccable. That is to say, if the two premises as diagrammed are granted, the conclusion follows. This argument, original in Russell, is prized by him and recurs in his latest and most serious writings in contexts dealing with his philosophy of perception.[4]

[3] Whitehead and Russell, *Principia Mathematica* (Cambridge: University Press, 1910), Vol. I, Part I, Section A, 2, *2.01. This logical principle, the very first that Whitehead and Russell demonstrate in *Principia*, is as follows: $\vdash: p \supset \sim p . \supset . \sim p$. Of it, the authors say this: "This proposition states that, if p implies its own falsehood, then p is false. It is called the 'principle of the *reductio ad absurdum*.' "

[4] Consider, for example, *Human Knowledge* (New York: Simon and Schuster, 1948), pp. 197–198.

A further striking feature of this argument, already noted, is the immensity of the conclusions said to be reached by it. The contexts within which the logical term "therefore" recurs in the italicized part of the quotation indicate that the argument is said by Russell to achieve a double conclusion, both a refutation of naive realism (as indicated also in the skeleton) and a defense of the causal theory of perception (omitted from the skeleton).

A third important characteristic is that this argument, which claims to prove so much, involves a minimum of assertions in its premises. Notice especially that nowhere in the argument is naive realism asserted. Nor is a single statement from the sciences of physics and physiology asserted. What are actually asserted as premises are merely what appear to be two hypothetical statements: (1) If naive realism is accepted, it leads to physics; and (2) If physics is accepted, it requires the rejection of naive realism. Hence, because the assumption of naive realism is said to lead to its own negation, naive realism is said to be false.

Thus, this statement also: (3) Naive realism is false, and this one, too: (4) The causal theory of perception is true, are also independently asserted as two singular atomic statements. Moreover, it is understood that they (i.e., (3) and (4)) are supposed to be legitimately asserted on the ground that each one of them is independently deductively inferrible from assertions (1) and (2) in accordance with the canons of pure logic.

Thus only (1) and (2) are asserted as premises, but neither of them asserts either naive realism or any scientific proposition of physics or physiology.

Herein lies a principal difference between this argument and the scientific arguments against naive realism and for the causal theory of perception emphasized since Descartes: This argument, to reach its ambitious conclusions, does not depend in any way whatsoever upon asserting a single statement found in the sciences. To be sure, certain results of the physical sciences are employed in the statement of it. The results thus employed are those suggested in the passage quoted from the *Inquiry,* namely, the statements which physics and physiology make concerning the *causal conditions* of the sensory constituents of our perceptions, and those which physics makes concerning the *abstract character* of physical objects. Yet, though these statements are thus mentioned in stating this argument, even a hasty glance shows that they are not independently asserted and that therefore the argument would be equally valid, if it is valid at all, even if the statements so mentioned were themselves denied, for the argument requires of its premises only that they correctly assert merely that certain

relations hold between these scientific statements and those defining naive realism. It is not requisite, *for this argument*, that any of these scientific statements here mentioned be themselves independently asserted; and they are not asserted anywhere in *this* argument.

A fourth feature of this argument, which accounts for its third feature, is the fact that it is intended as a strict *reductio ad absurdum* argument. That is, a doctrine, naive realism, is allegedly refuted by showing that the doctrine, if it is assumed to be true, leads to the assertion of its own contradictory and is therefore *demonstrably* false. It is just this claim, that naive realism is a self-contradictory doctrine and therefore *demonstrably false*, which constitutes the novelty of Russell's new argument. That this is his intention is already clear from my showing that this argument is presented as a substitution instance of the logical principle referred to as "the principle of the *reductio ad absurdum*" and proved in *Principia Mathematica*. For this reason I shall refer to this attempted refutation of naive realism by Russell as his attempted *reductio ad absurdum* refutation.

Seldom does one meet an attack upon a major philosophical doctrine, or a defense of one, which looks so decisive. If it is sound, it is overwhelming. If it is unsound, then its exposure may affect profoundly our estimate of Russell's treatment of philosophical problems and doctrines concerned with nature and perceptual knowledge. For this reason, this argument is eminently worth examining. Moreover, now that we have familiarized ourselves with its logical contours, we may with confidence proceed to evaluate it.

Yet, so attractive is this argument in the definiteness and simplicity of its logical structure, in the modesty of its premises, in the immodesty of its conclusions, and in the apparent decisiveness of its outcome, that it seems a pity to threaten it by criticism.

II

One objection that could be pressed against this argument concerns the looseness of meaning of the crucial expression "naive realism." Russell has a habit of describing naive realism as the doctrine that "things are what they seem."[5] But one may be justly disappointed to find that a man who has devoted four decades to attacking this doctrine is content to state it so loosely. We might ask, for example, these questions: How do things seem? And to whom do they seem thus? And what is this seeming?

[5] Russell, *An Inquiry into Meaning and Truth*, p. 14; *Human Knowledge*, p. 197.

Is naive realism the view that things are identical with the content of sheer uninterpreted sensational awareness? Or is it a commonsense metaphysics? If one were disposed to excuse Russell for such looseness by supposing he is being delightfully elliptical, it still might be insisted that the ellipsis be eliminated in such a crucial argument and that a more exact formulation of naive realism be substituted.

Such a correction is indeed urgently needed if we are to understand just what the doctrine is which, called naive realism, functions as one of the principal elements in Russell's argument. Moreover, if we are to decide whether naive realism is self-contradictory, we very much need to have this doctrine clearly stated, proposition by proposition. Thus, one might expect that when Russell is concerned to prove naive realism self-contradictory, he would, contrary to his custom, spell out naive realism with care.

My aim here, however, is not to decide whether naive realism is self-contradictory but rather only to determine whether Russell has proved it to be self-contradictory. Thus, if, but only if, in the course of seeking to decide this selected question, I find that Russell's hasty way of referring to naive realism prevents my reaching a responsible judgment upon it, then I shall clear up his ellipsis. I can remove it, if required, simply by giving an explicit statement of the central themes that constitute naive realism. Thus, this initial minor criticism of Russell's argument would be met, and responsible criticism of his argument, if balked for want of such an account, could, with this emendation provided, then proceed regularly.

Suffice it here and now, therefore, to observe that this is not a defect inherent in Russell's argument but only in his exposition, readily correctible. Moreover, it may be that an adequate evaluation of Russell's argument is attainable without our correcting this defect in his articulation of it. This is why reconstruction of Russell's argument by making naive realism an explicitly defined doctrine will be postponed till needed, if needed at all, as part of my critical evaluation of Russell's argument.

Before we go at once to an evaluation of Russell's argument in its vital parts, a second minor preliminary criticism, a pruning down, a shrinkage, of Russell's argument as stated by him in the passage quoted above, is called for.

It is this: Even if Russell's two premises and reasoning be accepted and be regarded even as constituting a genuine *reductio* refutation, still the conclusion that follows is not that naive realism is false and a causal theory of perception is true but rather at most merely that naive realism is false. The denial of naive realism,

even if we assume that this argument achieves such a large result, still leaves open not only a large family of theories of "indirect" perception, of which Russell's causal theory of perception is only one conspicuous member, but also a number of varieties of phenomenalism, no one of which is ruled out either by Russell's *reductio* argument or by acceptance of its alleged conclusion, the denial of naive realism.

Russell regularly makes the mistake of hastily supposing that if an argument is decisive against naive realism, it is at the same time decisive for his causal theory of perception. That this is not the case is obvious not only from logical considerations concerning the number of respectable alternatives to naive realism but also from a glance at modern philosophy, in which Descartes, Hobbes, Locke, and Berkeley are found to *agree in rejecting naive realism* but then to *splinter into two opposing factions consisting of adherents of a causal theory of perception on the one hand and of phenomenalists on the other.* This kind of initial agreement and subsequent disagreement reflects permanent alternatives inherent in the very texture of this many-sided problem of perceptual knowledge and open to those who may agree to reject naive realism and indeed all forms of identification theory of perception.

If this second critical result is accepted, namely, that Russell's argument does not support a causal theory of perception but at best merely refutes naive realism, then there still remains the question whether his argument even achieves that rather immense result. It does not do more. But does it do less? Does it fail even to discredit naive realism? Here we leave preliminary clarificatory criticisms. We come to the substantial issue and the very core of the matter of evaluating Russell's argument.

This central question, it appears, can be decided only by questioning what has thus far been left unquestioned, namely, whether the premises of Russell's argument are true and whether the reasoning exhibited in it makes it a genuine *reductio ad absurdum* argument, or at least a substitution instance of *some* valid pattern of inference. Indeed, this complex question itself needs to be segmented if it is to be successfully dealt with. To answer it, it is required *first* that the meanings of the premises be clearly determined. That done, we may *then but not till then* consider whether they are true. If the premises are found true, we may, *in the third place,* see whether the pattern of reasoning is valid. *Finally,* we can from these results judge definitively whether the conclusion that naive realism is demonstrably false is itself established by Russell by this ingenious argument.

Let us consider first how we are to understand the second premise, "Physics shows that naive realism is false."

III

When we examine this second premise, "Physics *shows* that naive realism is false," we find a statement that means "Doctrinally, physics *implies* that naive realism is false." This is an assertion to the effect that in the movement from naive realism to physics we come to assert *scientific statements which are inconsistent with the statements defining naive realism.*

That is, there is, on the one hand, one system of statements, *the scientific statements* concerning the characteristics of physical objects and concerning the conditions of intra-organic percipient events. There are, on the other hand, *the two statements defining naive realism*—that there are persistent physical objects *and* that in perceiving them we directly sense properties which literally belong to such physical objects. *These two sets of statements,* however, present us with contrasting accounts of the nature of physical objects, of both the characteristics and the conditions of occurrence of the sensory constituents of our perceptions, and of the relations between these sensory components of our perceptions on the one hand and the physical objects said to be perceived on the other hand. In fact—and this is the crux of this premise—so contrasting are these two different accounts, that of physics and that of naive realism, that the account of the physical sciences *implies* the falsehood of that of naive realism. It cannot be that both are true.

Therefore, we must either reject naive realism, at least one of its theses, or reject at least some of the knowledge claims presented by the most systematically developed of all the sciences, physics and physiology. This is what Russell means by his statement, "Physics *shows* that naive realism is false."

If one wonders, naturally enough, what are the statements which are made by the physicists and physiologists which are said to be inconsistent with naive realism, one needs only to review the passage quoted at the outset of this discussion of the *reductio* argument. The relevant scientific propositions are of two kinds: (1) statements concerning the causal conditions of our sensory contents; (2) statements concerning the qualitative contrast between physical objects as described by modern science and sensory contents as immediately experienced. These knowledge claims in the sciences, if they were asserted by anyone, would, we are told in the second premise, force him to reject naive realism, because they and naive realism are doctrinally inconsistent.

At this juncture I shall not argue further that this is indeed what is to be understood by "Physics shows that naive realism is false," for three reasons:

First, no other interpretation seems at all plausible.

Second, the philosophical literature on perception at least since the time of Descartes[6] is marked by this very statement, highly argued, that physico-physiological scientific knowledge, if accepted, forces a rejection of the common-sense doctrine of naive realism. Among Descartes's successors in pressing this assertion are to be found Hobbes,[7] Locke,[8] Broad,[9] Lovejoy,[10] and—to mention one who at least gives it respectful attention—Whitehead.[11] Thus, since this assertion is a part of the public domain of statemental property used in discussions of the relation between scientific knowledge and the claims of common-sense realism, an initial plausibility accrues to our assumption, in advance of examining Russell's writings, that Russell, holding this same doctrine as to the falsehood of naive realism, might indeed borrow from this long tradition of anti-common-sense philosophers one of its cornerstone arguments. This provides a second support for my interpretation.

When we turn to Russell's writings, we are confirmed in this assumption, for Russell emphatically acknowledges himself again and again to be a self-appointed inheritor of this highly buttressed statement long defended in the history of modern philosophy.[12] This is a third reason for my confidence in my interpretation of Russell's first premise.

In the fourth place, there are abundant and clear passages in Russell's own writings throughout his career in which he explicitly argues, in his own right and without reference to his intel-

[6] Descartes, *Meditations*, III (Vol. I, p. 157, in *The Philosophical Works of Descartes*, ed. and tr. by E. S. Haldane and G. R. T. Ross, Cambridge University Press, 1911, 2 vols); *Meditations*, I (Vol. I, pp. 158, 163); *The Principles of Philosophy*, CXCVI (Vol. I, pp. 293–294).

[7] Hobbes, *Leviathan*, Part I, Chapters I and VI.

[8] Locke, *An Essay concerning Human Understanding*, Book IV, Chapter IV, Section 3.

[9] C. D. Broad, *The Mind and Its Place in Nature* (London: Kegan Paul, Trench, Trubner & Co., Ltd., 1925), pp. 165–166, 171–176.

[10] A. O. Lovejoy, *The Revolt against Dualism* (New York: W. W. Norton & Co., Inc., 1930), pp. 18, 20, 22, 61–69.

[11] A. N. Whitehead, *An Introduction to Mathematics* (London: Oxford University Press [1911], 1945), pp. 49–51.

[12] Russell, *The Problems of Philosophy* (London: Williams and Norgate, 1912), pp. 18, 27–29; *Our Knowledge of the External World* (London: George Allen & Unwin Ltd., rev. ed., 1926), p. 71; *Mysticism and Logic* (London: Longmans, Green and Co., 1918), pp. 125–128; *A History of Western Philosophy* (New York: Simon & Schuster, 1945), p. 564.

lectual ancestors, that physics *shows* that naive realism is false in the unmistakable sense that physics *implies* that naive realism is false.[13] That this assertion is so prominent in Russell's technical writings since 1912 seems, then, to provide an additional strong support of my interpretation of "Physics shows that naive realism is false" as meaning the same as "Physics implies that naive realism is false."

For these reasons, no other interpretation of it seems likely, and my interpretation seems to require no further argument.

It is to be remembered, however, that while this second premise asserts that the doctrines of physics imply the falsity of naive realism, it does not assert any of these statements of physics. Rather, it asserts that a certain logical relation holds between certain statements in physics and physiology on the one hand and those defining naive realism on the other hand, namely, a relation such that *if* we assert the scientific statements, *then* we must deny the statements defining naive realism. This, it will be recalled, is one of the distinctive characteristics of this argument, in virtue of which it purports to be a *reductio ad absurdum* refutation of naive realism.

It is to be further remembered that I am presently concerned not with the *truth value* of this premise but only with the fixing of its *meaning*. To determine whether it is true is quite a different problem, and a more arduous one to be considered subsequently, as already planned earlier, if but only if we are required to do so in the course of judging whether Russell's *reductio* does in fact prove naive realism self-contradictory.

IV

If we attend both to the context of the passage quoted above, which I chose as a model statement of Russell's *reductio ad absurdum* argument, and to numerous other similar and unambiguous passages in the writings of Russell, we shall become convinced that the first premise is to be understood as a statement about history, the history of science as a public growth of doctrine. "We all start from 'naive realism'" in supposing that "things are what they seem." But as naive realists have become gradually more reflective and have amassed a knowledge of physical nature and of

[13] Russell, *The Problems of Philosophy*, pp. 9–57—an especially full account of Russell's reasoning in favor of this premise as it appears throughout his subsequent writings; *Philosophy* (New York: W. W. Norton & Co., 1940), pp. 144–153; "Reply to Criticisms," Schilpp volume, pp. 700–706, where Russell works hard to answer Nagel's essay, pp. 709, 719; *A History of Western Philosophy*, pp. 610–613, 832–834; *Human Knowledge*, pp. 169–170, 172, 198–199, 204, 208, 209, 221–222, 225, 320, 321, 323.

the processes found in percipient organisms, naive realists have come to regard as knowledge many statements constituting the sciences of physics and physiology. It is in this sense only that naive realism leads to physics, namely, that, *historically and psychologically, reflective study of nature begins not with solipsism nor with any other subjective or sceptical outlook but rather with realism in its naive form,* and then moves from this kind of realism and theory of direct perception to the esoteric doctrines of physics and physiology. "Naive realism leads to physics" is to be taken as a statement by Russell about the evolution of scientific thought from the prescientific beliefs of common-sense naive realism.

To assure oneself that this is the intention of Russell in this statement, and at the same time to see how fundamental and prominent this theme is in Russell's philosophy of perception, let us first extend our view to a few of the numerous other passages in Russell's writings at various of his periods, in which he unambiguously develops this doctrine.

Consider, for example, the following passage, written approximately a decade after the key passage quoted above from the *Inquiry:*

> Historically, physicists started from naive realism, that is to say, from the belief that external objects are exactly as they seem. On the basis of this assumption, they developed a theory which made matter something quite unlike what we perceive. Thus, their conclusion contradicted their premise, though no one except a few philosophers noticed this. We, therefore, have to decide whether, if physics is true, the hypothesis of naive realism can be so modified that there shall be a valid inference from percepts to physics.[14]

The points to be emphasized in this passage are the following: (1) It presents an argument which exhibits exactly the same logical structure as the argument quoted above from the *Inquiry;* it is the now familiar *reductio* argument. (2) It derives its conclusion that there is something wrong with naive realism from a combination of two unambiguous assertions: (a) that naive realism is historically the source from which physics developed and (b) that physics has reached conclusions which are doctrinally inconsistent with its own historical antecedents. Clearly, this passage indicates that the statement that naive realism leads to physics is intended as a statement about the historical antecedents of the physical sciences.

A further passage in which Russell asserts the doctrine that the physical sciences have their origin in the naive realism of common sense is found in his response to a vigorous criticism made of him by Ernest Nagel, where Russell says:

[14] Russell, *Human Knowledge,* pp. 197–198.

> He seems to be engaged in a vehement defence of common sense, and he points out, quite truly, that *all science starts from common sense. . . . Most* of our common-sense beliefs must be right from a practical point of view, or else science could never get started; but some turn out wrong. Science diminishes their number; in this sense it corrects common sense in spite of starting from it.[15]

Here again the same points emerge: Science historically emerges from common-sense realism; also, though Russell says so in less crisp logical form, here again we are told that science is found to correct its parent. Thus here, too, are the *reductio* features: Naive realism leads to physics, physics finds faults in common sense, and, in correcting them, displaces common-sense realism.

Reference to these representative passages from various of Russell's basic writings gives assurance that Russell's premise "Naive realism leads to physics" is intended by him as a statement about the historical antecedents of physical science.

In a word, Russell's first premise, "Naive realism *leads to* physics," is found, by reference to parallel passages in his other related writings, not to mean "Naive realism *implies* physics" but rather to assert "Historically, the doctrine of naive realism was the point of departure from which physicists and physiologists developed the statements constituting their science" or, for short, "Naive realism *is ancestor of* physics and physiology." It is intended not as a statement of a straightforward implication but rather as a genetic theory concerning how physics has arisen historically from naive realism.

Citation of similar parallel unambiguous passages asserting the evolution of physics from naive realism is, however, not the only method by which my interpretation of "naive realism leads to physics" may be supported as a faithful rendering of this premise. If, instead of individual confirming quotations, one would prefer, as a second method of testing it, to consider a sustained and systematic development by Russell of this central thesis of his concerning how the physical sciences have evolved from common-sense realism, then one may find such an elaboration meticulously developed in a full chapter, "From Common Sense to Physics," in a book which is one of Russell's principal works and still one of the most authentic expressions of his technical epistemology and metaphysics.[16]

There is yet a third line of exposition that could be adduced in support of this interpretation, namely, Russell's entire and very elaborate theory of natural belief, that is, his account of how our

[15] Russell, "Reply to Criticisms," in *The Philosophy of Bertrand Russell*, pp. 703–704. The italics for "most" are Russell's; the others are mine.

[16] Russell, *The Analysis of Matter*, pp. 141–168.

principal beliefs, however scientific and sophisticated, may be connected by means of a genealogy of belief with common-sense beliefs and these in turn, step by step, with "pure" experience. This larger theory, once set forth, would contain as one among many of its instances the narrower thesis that naive realism is historically the springboard for physics. However, this larger thesis of Russell's, very prominent in all his epistemological treatises since 1927, cannot be reviewed here.[17] But if it could be, it would provide a further compelling support of my interpretation of "Naive realism *leads to* physics" to mean the same as "Naive realism *is ancestor of* physics."[18]

V

I have sought to interpret separately the two premises of Russell's proposed *reductio* argument in the most favorable light possible. That is, I have represented them, vague at the outset, in a manner that makes each one of them definite and promptly intelligible. Also, each has been thus interpreted in accordance with diverse relevant textual materials from Russell's own writings, by reference to which alone the correctness of my interpretations is to be established. Moreover, each of them, as a result of the interpretation given it, is found to be, upon further inquiry, perhaps true, but surely not obviously false.

[17] This larger theory is conspicuous in *Human Knowledge* from cover to cover. One brief statement of it: "This example [i.e., of how grunts in a dentist's chair may develop into language] illustrates the fact that, in the matter of language as in other respects, there is a continuous gradation from animal behavior to that of the most precise man of science, and from prelinguistic noises to the polished diction of the lexicographer" (p. 58). This evolutionary outlook upon the development of all our beliefs is elaborated with greatest care in Part Three of *Human Knowledge*, especially in Chapters I and III. But it permeates Russell's whole treatment of all the epistemological tasks he sets his hand to in this his *magnum opus*, and has tended to do so in all his philosophizing, with various degrees of emphasis and self-consciousness, since 1912. This is another way of saying that Russell's strictly epistemological analyses are very intimately interwoven with psycho-sociological and historical elements.

[18] Moreover, the applicability of this evolutionary account of natural belief to the specific case of naive realism and physics tends to strengthen its own credibility, and at the same time to reënforce this account of the relation of naive realism to science by subsuming it under a wider and independently supported theory. The situation is comparable to the way in which Kepler's rather narrow theory of planetary motions, already resting on empirical observations accumulated by Tycho Brahe, tended to give support to Newton's more comprehensive theory of universal gravitation, itself already independently supported by other considerations, and in turn tended to be strengthened further itself by systematic inclusion within Newton's larger theory.

However, in thus favorably interpreting these premises, themselves fundamental doctrines in Russell's philosophy, I have brought us to the point of seeing that they, together with the alleged conclusion said to follow from them, do not constitute a genuine *reductio ad absurdum* argument, that they do not form any valid argument at all, and that therefore they yield no conclusion whatsoever.

All that is now needed to exhibit this definitive critical result is to write down the statements of Russell's alleged argument first in their original loose form and sequence and then in their precise form and the same sequence as follows:

Russell's Original Loose Form	*Exact Form*
1. Naive realism *leads to* physics.	1. Historically, naive realism *is the ancestor of* physics.
2. Physics *shows* that naive realism is false.	2. Doctrinally, physics *implies* that naive realism is false.
3. Therefore, naive realism, if true, is false.	3. Therefore, nothing.
4. Therefore, naive realism is demonstrably false.	4. Therefore, nothing.
5. Therefore, the causal theory of perception is true.	5. Therefore, nothing.

This result has been achieved with an ease and simplicity somewhat surprising, for movement through the sequence of several steps outlined at the end of Section II has not been necessary after all. Nor has it been necessary to draw out an explicit account of naive realism elliptically employed in Russell's argument. Rather, as a result of completing merely the first step in the originally proposed plan for examining Russell's argument, that is, by an exact determination of what is asserted by the two premises, this argument is wholly discredited. It is shown to be an instance of spurious reasoning. My exposure of the semantical blunder of confusing "leads to" and "shows" shows, quite apart from questions concerning the truth values of the premises, that Russell's conclusion does not follow from the premises of his pseudo-argument. Even if the premises were appraised and found to be wholly correct, Russell's conclusion nonetheless still would not follow. It thus becomes unnecessary to consider whether the premises are themselves true.

I wish to add, though, that each of Russell's premises expresses a very large and significant theme, each logically independent of the other, both eminently worthy of attention. Moreover, each of them summarizes a doctrine of very considerable importance within Russell's own mature philosophical system. For each of them I have great respect. My rejection of Russell's argument upon the

judgment that it is an instance of a *non sequitur* in no way affects the question whether either, neither, or both of these premises are to be accepted as true.

What is more, my criticism does not even determine whether the conclusion of Russell's argument is itself to be accepted as true. So far as my criticism goes, it may very well be that naive realism is indeed not merely false but demonstrably false, just as Russell mistakenly "concludes" from his premises.

What has been shown, in fact, is little but decisive. This ingenious argument created by Russell and admired by Einstein fails to show even that naive realism is false. *A fortiori,* it fails to show that it is demonstrably false because self-contradictory.

Whether naive realism is self-contradictory and, if not, whether it is true, are, of course, further questions, and ones not decided by the critical result which I have achieved here.

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EMPIRICISM: ONE "DOGMA" OR TWO?

IN the controversy touched off by Professor Quine's "Two Dogmas of Empiricism" and evidenced by the extraordinary spate of articles which has appeared on the subject in the little more than four years since, only one writer so far as I am aware, Professor Hofstadter, has questioned Quine's claim that the two dogmas are "at root identical."[1] Without drawing any conclusions about whether the views characterized by Quine as dogmas are adequately so characterized, or about whether, dogmas or not, they are ill-founded, I want to examine the proposition, asserted by Quine and denied by Hofstadter, that they are identical.

The views at issue are, first, that there is "some fundamental

[1] Quine's article appears in *The Philosophical Review,* Vol. LX (1951), pp. 20–43, and is reprinted with minor changes in his *From a Logical Point of View* (Cambridge: Harvard University Press, 1953), pp. 20–46. References will be to the latter, present reference being to p. 41.

Albert Hofstadter, "The Myth of the Whole: A Consideration of Quine's View of Knowledge," *Journal of Philosophy,* Vol. LI (1954), pp. 397–417.

For reference to a few of the other articles mentioned, and for an informative presentation of the whole problem, see Alan Gewirth, "The Distinction between Analytic and Syntaetic Truths," *Journal of Philosophy,* Vol. L (1953), pp. 397–425. Also of interest is Gustav Bergmann's "Two Cornerstones of Empiricism," *Synthèse,* Vol. 8 (1953), pp. 435–452, reprinted in his *The Metaphysics of Logical Positivism* (New York: Longmans, Green and Co., 1954), pp. 78–105.

cleavage" between analytic and synthetic truths, and, second, that "each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience" (p. 20). For brevity's sake I will call them (after Quine) the dogmas of analyticity and reductionism, respectively.

I

Few will have any difficulty in recognizing analyticity and reductionism as indeed closely related to empiricism, and few will contest the assertion that whether or not they are identical they are at least intimately bound up with each other. A convenient conceptual device for exhibiting this intimacy is the verification theory of meaning, the theory, according to Quine, that "the meaning of a statement is the method of empirically confirming or infirming it" (p. 37). If it is meaningfulness rather than meaning for which the criterion is wanted, the verification theory can be said to be the theory that a statement is meaningful if there is a method of empirically confirming or infirming it. The reason that the verification theory is a convenient device for exhibiting the intimacy between analyticity and reductionism is that the verification theory is itself intimate with both.

It is intimate with analyticity because it defines empirical meaningfulness and therefore defines the fundamental cleavage which is thought to exist between analytic and synthetic truths. It is intimate with reductionism because reductionism defines the nature of verification, the nature, in Quine's words, "of the relation between a statement and the experiences which contribute to or detract from its confirmation" (p. 38). Moreover, the verification theory helps clarify analyticity because in terms of the theory an analytic statement would seem to be "a limiting kind of statement which is vacuously confirmed, *ipso facto*, come what may" (p. 41).

In these terms, however, it is certainly not obvious that the two beliefs are really the same belief. If it is maintained that the nature of empirical meaningfulness is adequately expressed by the verification theory, still there is no necessity for maintaining in addition that there is a limiting kind of statement which is confirmed vacuously, *ipso facto* and come what may, and that this is the ground of its empirical meaningfulness. But even if this latter assertion did follow from proclamation of the verification theory as dogma, it is not the same assertion as the assertion that there is a fundamental cleavage between analytic and synthetic truths. And in fact not only is it not the same assertion as the fundamental cleavage assertion, it is the denial of that assertion. To say of a statement that it is a limiting case of a certain class of

statements is—though perhaps not to include it in that class—anyhow to suggest there is some sort of continuity between the statements in the class and the statement of the limiting kind, and therefore to deny a fundamental cleavage to separate them. Thus, on the view under consideration, the statement "No bachelor is married" is a perfectly good empirical, and hence synthetic, statement whose empirical meaningfulness happens to reside in the fact that it is confirmed no matter what.

Nor does it help to travel in the other direction, to start with analyticity and work toward reductionism all in terms of the verification theory of meaning, because now instead of arriving at an inconsistency we begin with one, the inconsistency of asserting that some true statements, namely analytic statements, are devoid of empirical meaningfulness and their empirical meaningfulness resides in their vacuous confirmation.

The trouble lies in characterizing analytic statements as a limiting kind of statement which is confirmed no matter what. It is as though we were to assert that a fundamental cleavage exists between two kinds of vessels, surface vessels and submarines, to view submarines as vessels having the ability to become unsubmerged without aid, and then to characterize surface vessels as a limiting kind of submarine which is unsubmerged no matter what.[2] True, surface vessels *are* unsubmerged no matter what, and to that extent, if we force the issue, a limiting kind of submarine, but this is not enlightening with respect to the nature of the alleged fundamental cleavage between surface vessels and submarines. It is rather the sort of argument a carrier skipper might use to persuade a submarine-minded appropriations committee.

II

Instead of reëxamining the verification theory of meaning for clues to the identification of analyticity and reductionism, I will weaken Quine's claim and investigate Hofstadter's counter-claim.

Quine's arguments in favor of the root identity of the two dogmas are confined to the "limiting kind" or "extreme case" sort of argument that is based on the verification theory and has

[2] The analogy may be made more exact by demanding that all recognized vessels be "surfaceful," and defining "surfacefulness" as the ability to become unsubmerged without aid. The characterization of surface vessels as a limiting kind of submarine then becomes necessary to explain why surface vessels are recognized. What has happened, of course, is that a criterion framed in terms of one kind of object has been unjustifiably extended to apply without qualification to a second kind, and balance is then restored by giving a distorted characterization of the second kind—a perfect example of Vaihinger's "method of antithetic error."

already been found wanting in cogency. In its final form, this is the argument that the truth of statements depends both on language and on extra-linguistic fact; that this double dependency "carries in its train, not logically but all too naturally" a two-fold constituency of the truth of a statement, one linguistic and the other (which must for empiricists "boil down to a range of confirmatory experiences") factual; and that an analytic statement is the "extreme case" where the linguistic constituent is "all that matters" (p. 41). One still wonders what sort of relationship this identity-relationship can be.

Moreover, Quine does not speak of the two dogmas as "at root identical" throughout his article: at times he says only that they are "intimately connected" or that one "clearly supports" the other (p. 41). And in all probability I am looking for far more significance than Quine intended the word "identical" to have. Furthermore, the reply might well be that the expression in question is not "identical" but rather "at root identical," that no such simple and literal sense of identity is intended as the one I seem to be demanding, but some deeper sense which is "at the root" of the whole matter. Hofstadter in fact suggests that what is at the root of the matter is the supposition, common to the two dogmas, that "the statement is the unit of significance," and the suggestion is certainly supported by Quine in his discussion of empiricism without the dogmas. However, and quite apart from Quine, the simple and literal relationship between the dogmas is an intriguing problem by itself, and I will continue to examine it.

Clearly it is not being argued, and no case could be made for the position, that the dogmas are identical in some intensional sense of identity. I shall assume, therefore, that what is being claimed is that the analyticity and reductionism dogmas are extensionally equivalent, that if either is denied the other cannot be consistently affirmed.

But Hofstadter shows that even this claim is false.[3] Suppose, he requests, that there is a sharp distinction in our language between analytic and synthetic, and that the statement "The current in this galvanometer coil is 2 amperes" is clearly and distinctly synthetic. Still, according to Hofstadter, in order to isolate the observable consequences or factual constituent of the statement, for example a deviation of the galvanometer mirror, other statements, of theory and of antecedent conditions, are required, as Duhem has shown. The statement does not, in other words, by

[3] Hofstadter is not arguing explicitly against the claim of extensional equivalence, but, in showing that one dogma may be maintained and the other rejected without inconsistency, he implicitly denies that claim.

itself "boil down to a range of confirmatory experiences," and hence there is a statement which is both synthetic and unempirical. Hofstadter falsifies the claim of extensional equivalence by demonstrating that reductionism could be denied and nevertheless analyticity affirmed.

There is another possibility, which doubtless is far from what Quine had in mind when he said the two dogmas are at root identical, but still it is a possibility. This is the even weaker claim that reductionism cannot be affirmed at the same time that analyticity is denied although analyticity can be affirmed at the same time that reductionism is denied, which is to say that reductionism implies analyticity, or in still other words that analyticity is a necessary condition for reductionism.

Can this claim be defended? Suppose the statement "The current in this galvanometer coil is 2 amperes" does have "its own isolable counterpart in experience" (Hofstadter's expression), say a deviation of the galvanometer mirror. In this case it is empirically meaningful according to what Quine calls the "attenuated form" of the dogma of reductionism (p. 41), and it is undeniably synthetic by any criterion which admits a connection between a statement's meaning and its experiential counterpart. Nevertheless, that there is a statement which is clearly and distinctly synthetic is no reason why there must be a sharp distinction between synthetic and analytic statements—no reason why, say, "2 amperes is 2 amperes" must be clearly and distinctly analytic. It has recently been maintained, for example, that repetitive statements such as "2 amperes is 2 amperes" are not analytic because not only are no two words ever synonymous but no two tokens of the same word ever have the same meaning in every respect.[4] It seems legitimate on the basis of this argument, therefore, to affirm the dogma of reductionism while denying the dogma of analyticity, and the claim that the former implies the latter seems to be falsified.

III

Before quitting this latter claim, however, let me call attention to a feature of the argument against it which strikes me as odd.

[4] Richard Rudner, "A Note on Likeness of Meaning," *Analysis*, Vol. 10 (1949–50), pp. 115–118. But see B. L. Robbins, "On Synonymy of Word-Events," *Analysis*, Vol. 12 (1951–52), p. 100, and Nelson Goodman, "On Some Differences about Meaning," *Analysis*, Vol. 13 (1952–53), p. 92, in which Rudner's claim (an extension of Goodman's analysis of synonymy in "On Likeness of Meaning," *Analysis*, Vol. 10 (1949–50), pp. 1–7, reprinted in *Semantics and the Philosophy of Language*, ed. by Leonard Linsky (Urbana: University of Illinois Press, 1952), pp. 67–74) is denied.

The argument rests on a hypothetical state of affairs which is characterized, first, by the absence of any fundamental cleavage between truths which are analytic and truths which are synthetic, and, second, by the validity of the principle that every meaningful synthetic statement is empirical, that is to say, has its own "range of confirmatory experiences." What strikes me as odd about this is that when there is no fundamental cleavage between analytic and synthetic statements the empirical status of a principle or dogma which is about synthetic statements but not analytic ones becomes dubious. The denial of analyticity would mean that "No bachelor is married" and "No bachelor is sentimental" are on a par so far as their having or failing to have experiential import is concerned. But then what does one mean when one asserts that every meaningful synthetic statement has its own range of confirmatory experiences, or, more precisely, what, in this case, is the denotation of "statement having its own range of confirmatory experiences"? It must be either the universal or the null class of statements, and in either case empiricism is indeed a "metaphysical article of faith."

One could, it is true, reformulate the reductionist principle in such a way that synthetic statements are not alluded to and the denotation in question is neither zero nor universal. One could, for example, reformulate it simply as the principle that "every meaningful statement has its own range of confirmatory experiences." But this, as will be seen shortly, would be not so much a reformulation as a return to the original expression of empiricism, the expression which forced empiricists to deal with the problem of how the meaningfulness of logical and mathematical statements can be preserved.

Either "No bachelor is married" has its own range of confirmatory experiences, just as "No bachelor is sentimental" has, or else it hasn't. If the latter is the case, then a second principle is needed to distinguish between the "No bachelor is married" kind of non-empirical statement and another kind of non-empirical statement which does not have its own range of confirmatory experiences either but which empiricists have been most anxious to deny significance to. This second principle, however, would bear a suspicious resemblance to the analyticity principle that, on the present hypothesis, is rejected.[5] If, on the other hand, "No

[5] Thus Rudolf Carnap, in an early paper ("Formal and Factual Science," translated by Herbert Feigl and May Brodbeck and printed in their *Readings in the Philosophy of Science* (New York: Appleton-Century-Crofts, 1953), pp. 123–128), spoke of analytic statements as "auxiliary statements," "mere calculational devices" which "facilitate linguistic transformations in the factual sciences" (italics omitted). The second principle required would

bachelor is married" is linked with "No bachelor is sentimental" in having its own range of confirmatory experiences, then the reductionist principle seems to be compromised by the difficulty encountered in attempting to explain how "No bachelor is married" is able to have its own range of confirmatory experiences and moreover to have it in a way in which certain other statements, to which empiricists have wanted to deny meaningfulness, cannot. By formulating the principle of reductionism so that it is applicable to synthetic statements alone, empiricists avoid these problems—but they also put themselves in a position of dependence, as I am suggesting, on the analytic-synthetic distinction.

Thus, although the simultaneous affirmation of reductionism and denial of analyticity cannot be said to be contradictory (unless, of course, the former is formulated so as to include the stipulation that the class of statements to which the dogma is applicable be neither null nor universal), the conclusion may be tentatively established that without analyticity the dogma of reductionism becomes vacuous. This need not, to be sure, make it also invalid; it might be argued, as I have mentioned, that all statements are synthetic, or it could be argued that if we ever should run across a statement which is clearly and distinctly synthetic then, so the dogma of reductionism tells us, that statement has its own range of confirmatory experiences. But a principle which exhorts us to accept as empirically meaningful certain members of the class of synthetic statements and no members of the class of non-synthetic statements is, in the absence of a clear division between those classes, or even of assurance that there is a division at all, a strange kind of principle even though not invalid. An exhortation which we either cannot possibly heed or else cannot possibly avoid heeding is a vacuous exhortation, and the principle which expresses it is a vacuous principle. At any rate, the tentative conclusion is that analyticity it is a necessary condition for what may be called the empirical or *non-vacuous validity* of reductionism.

Moreover, it may be noted that a corresponding weakened conclusion cannot be drawn from the argument which denies that reductionism is a necessary condition for analyticity: it cannot be said that reductionism is a necessary condition for the non-vacuous validity of analyticity. To assume the denial of reductionism is to assume that not all meaningful synthetic statements have their own ranges of confirmatory experiences. But nevertheless it may

on this view have to distinguish between two kinds of non-empirical statements, those which facilitate calculation and those which do not—or, to point up the moral, between non-empirical statements which have "calculational significance" and those which have not.

be not only true but non-vacuously true that there is a fundamental cleavage between analytic and synthetic statements. The conclusion I am tentatively drawing, therefore, is a one-way conclusion: analyticity is a necessary condition for the non-vacuous validity of reductionism, but reductionism is not a necessary condition for the non-vacuous validity of analyticity. I want to make this conclusion less tentative now, by exhibiting the problem very briefly in terms which are more traditional and to my mind clearer than those used heretofore.

IV

Whereas according to Quine analyticity and reductionism are the two dogmas of empiricism, historically the concept of reductionism is by itself an attempt to explicate what has been traditionally called empiricism, while the belief in a distinction between analytic and synthetic truths has been held in one form or another by philosophers as different as Aquinas, Leibniz, and Hume. In the sketchiest of terms, empiricism as it developed in Locke and Hume was the belief that all ideas are derived from experience, or, more properly, the principle that all ideas or statements ought to be derived from experience if they are to be accounted meaningful ideas or statements.

A separate concept was the concept—which, as noted, played an important role in non-empiricist philosophies—of a distinction between matters of fact and relations among ideas, which together, for Hume, exhausted the content of meaningful discourse. And in order to preserve the necessity of mathematical propositions from the contingency of factual ones, Hume declared that no reasoning about relations among ideas could give any knowledge about matters of fact.

Both concepts are conveniently exhibited in Kantian terms. Kant made a helpful distinction between the content of a statement and its sources, or between the property a statement has by virtue of being about experience and the property it has by virtue of being derived from (or, as we may say, validated in terms of) experience. Statements which are about experience are synthetic statements; statements which are not are, if true, analytic. Statements which are derived from or validated in terms of experience are *a posteriori* statements; statements which are not are *a priori*.[6]

Empiricism may now be formulated as the principle that the distinction between analytic and synthetic and the distinction between *a priori* and *a posteriori* are coëxtensive—the principle, in

[6] See *Prolegomena*, sections 1–2, and *Critique of Pure Reason*, pp. A 5–10, B 9–14.

other words, that all and only statements about experience are (if recognized by empiricism) derived from experience and hence validated in terms of experience. The denial of empiricism may take and has taken the form of the assertion that there are meaningful synthetic statements *a priori*—that there are meaningful statements which are about experience but which nevertheless are neither derived from experience nor to be experientally validated. Analyticity is simply the principle that there is a sharp distinction, a "fundamental cleavage," between statements which are about experience and statements which aren't. The relationship obtaining between these two principles, at least so far as their extensions are concerned, may now be seen quite easily.

Suppose first that the principle of empiricism is rejected. This is to suppose that there is at least one statement, say "Every event has a cause," which is about experience (synthetic) but not derived from or validated in terms of experience (not *a posteriori*), and which is meaningful. There is nothing in this supposition to militate against the existence of a (non-vacuous) fundamental cleavage between truths which are about experience and truths which are not, unless one were to commit the error of confounding "about experience" with "validated in terms of experience"—but *ex hypothesi* these expressions are not even coëxtensive. In short, the principle of empiricism is not a necessary condition for the non-vacuous affirmation of the principle of analyticity.

Now suppose the principle of analyticity to be denied. There is then no sharp distinction between analytic and synthetic statements, between statements of the "No bachelor is married" and statements of the "No bachelor is sentimental" kinds. The empiricist principle cannot on this assumption be asserted in the form which involves the coëxtension of the analytic-synthetic and *a priori-a posteriori* distinctions, because what is assumed is that the first of these distinctions does not exist. One might, to be sure, also assume the non-existence of the other distinction and so preserve the necessary coëxtension—but then, one might just as well assume empiricism to begin with and not bother about all these details. At any rate, on the assumption that analyticity is false, to assert the principle of empiricism in the form which denies the meaningfulness of synthetic truths that are *a priori* is, once more, to make a vacuous assertion: where *are* the synthetic truths that are said not to be both meaningful and *a priori*? The principle of analyticity is thus a necessary condition for the principle of empiricism, in any non-vacuous sense of the latter.

I conclude that the result tentatively arrived at earlier in this paper is correct. The dogma of analyticity is a necessary condi-

tion for the non-vacuous validity of the dogma of reductionism (or of empiricism in its traditional sense), but the dogma of reductionism is not a necessary condition for the non-vacuous validity of the dogma of analyticity. One who believes there is a sharp distinction between analytic and synthetic may or may not be a reductionist, as he chooses; but one who is a reductionist (and this includes those who call themselves, on that account, empiricists) has no choice—either he must accept the existence of a sharp analytic-synthetic distinction as a consequence of his reductionism, or else he must accept the alternative consequence that his reductionism is as it stands a vacuous position which does not merit serious consideration.

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COMMENTS AND CRITICISM

ROYCE'S ENCYCLOPEDIA ARTICLES [1]

THE first time I ever heard Royce was soon after the turn of the century. He came to our high-school auditorium one afternoon at four, to lecture to the townspeople. My Sunday School teacher was distressed later. "He was using the simplest words, but it was the way he was putting them together!" I forget the main argument, but remember a joke. A mother says to her daughter, "Why *do* you always contradict what I say?" to which the daughter answers, "Why, mother dear, I never do." I know the lecture was castigating pragmatism, and it seems to me he used the illustration I heard from his lips several times in later years. The pragmatists say "the true is what works." An Irishman wrote an angry letter to another man, with uncomplimentary references to the man's mother. A friend tried to dissuade him from sending it. "What do you know about his mother?" "Yis, but it'll worrk. If he has a shpark of manhood about him, it'll shting him to the quick." Royce often told another story about the truth. The Captain recorded in the log, "Mate drunk today," and refused to cancel it, *because* it was true. Then came the

[1] This paper is an extempore comment, revised later with some additions, on Daniel Robinson's paper, read at the American Philosophical Association meeting at Boston University, December 29, 1955, which concerned Royce's articles on terminology, in Baldwin's *Dictionary of Philosophy and Psychology*. Robinson's article, "Royce on the Origin and Development of Philosophical Terminology," has since been printed in this JOURNAL, Vol. LIII (February 2, 1956), pp. 103–112.

Mate's turn to keep the log. "Captain sober today." The Captain stormed, but the Mate answered blandly, "It is true, isn't it?"

Professor Daniel Robinson calls attention to the high excellence of the articles by Royce in Baldwin's *Dictionary of Philosophy and Psychology,* on Greek and Latin terminology and that of Kant and of Hegel, as well as other articles, such as the one on the Individual. In such articles Royce escapes from his tendency towards verboseness. He used to repeat with glee the protest of an early reviewer, "Royce first tells us what he is going to say, then he says it, then he says that he has said it, and then finally he says what it was that he has said." There were also unkind people who, after reading such sentences as "I am, myself, in my philosophy, no mystic," started a rumor that Royce wrote his books in German, and then let his wife translate them. But his encyclopedia articles were almost always masterpieces of succinct precision, in Baldwin, and in Hastings' *Encyclopedia of Religion and Ethics.* I remember his coming in one morning to remark whimsically, "That man Hastings says he will give me four columns in which to write all I know about truth."

The article when it appeared was labeled, "Error and Truth," and ran four times that long, but far shorter than his usual style. The article on "Negativity" suffers from being so brief as to give little scope for his own views in his oral lectures. That on "Monotheism" is a mere sketch of orthodox opinions, but luckily left room for A. E. Taylor's brilliant "Theism" in a later volume. Royce's article on "Mind" is on symbols and interpretations, and instead of the usual bibliography of the great philosophers, has a closing note which may be summed up, "On 'Mind' read Charles Peirce." The two articles most characteristic of the later Royce are those on "Order" and "Axioms." The latter is a masterpiece, and he was proud of it. He started his Logic course, Philosophy 15, by assigning "Axioms," as he began his Metaphysics, the famous Philosophy 9, by assigning a paper on "What is Reality?" This may seem a poser, but actually a student at this stage of his development knows more about Reality than he will ever know again.

Royce was not sympathetic with Ralph Barton Perry's advocated new "exact" philosophical terminology. He said Browning might have had thoughts that "break through language and escape," but he had always found it possible himself to "say it in English," if you knew enough English. The inventor of a new technical term usually ends up by using it in more than one sense himself, and meanwhile nobody else is quite sure what he is talking about. It would be intolerable to have a new word for every one of the four hundred fifty or more current meanings in the Oxford

Dictionary for the verb "to take." The important thing is usually not the terms used, but the way you put them together.

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NEW BOOKS

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BERLIN, ISAIAH: *The Age of Enlightenment: The 18th Century Philosophers.* Selected, with Introd. and Interpretive Commentary, by Isaiah Berlin. [New York:] New American Library [1956]. 282 p. (The Mentor Philosophers. MD 172.) $0.50.

BRAHMACHARI, S.: *Social and Moral Attitudes; an Experimental and Psycho-Analytical Study.* Bombay, Calcutta, Madras: Orient Longmans [1954]. 113 p. Rs. 5/-. (Ph.D. thesis, University of London.)

ESSLINGER, WILLIAM: *Politics and Science.* With a Foreword by Albert Einstein. New York: Philosophical Library [1955]. xi, 167 p. $3.00.

GUTZKE, MANFORD GEORGE: *John Dewey's Thought and Its Implications for Christian Education.* New York: King's Crown Press, Columbia Univ., 1956. xv, 270 p. $4.00.

HILL, THOMAS E.: *Ethics in Theory and Practice.* New York T. Y. Crowell, 1956. xiii, 431 p. $4.50.

MILLER, OSCAR W.: *The Kantian Thing-in-Itself, or, The Creative Mind.* New York: Philosophical Library [1956]. xix, 142 p. $3.75.

NAHM, MILTON C.: *The Artist as Creator; an Essay of Human Freedom.* Baltimore: Johns Hopkins Press, 1956. xi, 353 p. $5.50.

OPLER, MARVIN K.: *Culture, Psychiatry, and Human Values; the Methods and Values of a Social Psychiatry.* With a Foreword by Thomas A. C. Rennie. Springfield, Ill.: Charles C. Thomas [1956]. xiii, 242 p. (Publication No. 287, American Lecture Series. A Monograph in The Bannerstone Division of American Lectures in Philosophy. Edited by Marvin Farber.) $6.00.

SCHRÖDINGER, E.: *Expanding Universes.* Cambridge: At the University Press, 1956. viii, 93 p. $3.50.

NOTES AND NEWS

We learn with regret of the death of William Kelley Wright, Professor Emeritus of Philosophy at Dartmouth College, on March 29, 1956.

William A. Earle, Associate Professor of Philosophy at Northwestern University, will be Visiting Lecturer at Yale University during the 1956–57 academic year.

Everett W. Hall, Chairman of the Department of Philosophy at the University of North Carolina, will be Visiting Professor at Northwestern University during the 1956 summer session. He will conduct a graduate seminar in "Fact and Value" and will teach a course in introductory philosophy.

The Cornell University Press proposes to publish a series of short books under the general title of "Contemporary Philosophy." The editor of the series will be Professor Max Black (Cornell), with the assistance of an editorial board composed of Professors Charles A. Baylis (Duke), William Frankena (Michigan), and Morton G. White (Harvard).

The books are intended to be original discussions of selected philosophical problems, though occasional surveys or translations may eventually be included. It is hoped that the series will encourage the preparation, especially by younger authors, of studies of particular topics of contemporary interest that are neglected or merely summarized in full-length treatises. Able expositions in any philosophical dialect will be welcomed, and no restriction upon subject-matter is contemplated. The length of the studies will normally be between 75 and 200 printed pages. The public aimed at will consist primarily of professional philosophers and graduate students, though not to the exclusion of interested laymen.

Philosophers who have work in progress or in preparation that might fit the aims of the series are invited to communicate with the editor, Professor Max Black, at the following address: Goldwin Smith Hall, Cornell University, Ithaca, New York.

A survey of investigations in progress in the field of Latin American studies is being jointly sponsored by the Department of Cultural Affairs of the Pan American Union and the School

of Inter-American Studies of the University of Florida at Gainesville. Questionnaires have been sent to faculty members and graduate students in all disciplines, and to independent scholars and researchers who may have investigations under way connected with Latin America. Those who do not receive questionnaires through the mail are urged to request them from the School of Inter-American Studies, University of Florida, Gainesville, Florida, in order that the published results may be as complete as possible. Distribution of the completed survey is scheduled for early fall.

THE SOCIETY FOR PSYCHICAL RESEARCH PRIZE ESSAY

The excellent response to last year's essay competition (which was won by Mr. William E. Cox, Jr.) has encouraged the donor to repeat his offer, and a prize of fifty pounds (or $140) will be awarded for an essay of less than 3000 words on one of the following topics:

(a) The best program of research for the first one hundred hours of work with the next successful card-guessing subject discovered (if there is one): the design should be supported by argument.

(b) The best discussion of the logical and/or scientific implications of precognition assuming this to be established statistically from the work of card-guessing subjects.

Entries should be submitted under a pseudonym together with a sealed envelope containing the entrant's actual name and address. They should be carefully written or typewritten, double-spaced, and should reach the Secretary, Society for Psychical Research, 31 Tavistock Square, London W.C.1, England, before October 1, 1956. Entrants may submit more than one entry. The judges will be Dr. D. J. West, Professor H. H. Price, and Mr. Denys Parsons, with assistance from Dr. S. G. Soal.

THE SOUTHERN SOCIETY FOR PHILOSOPHY AND PSYCHOLOGY

One hundred and sixty-two members registered for the Forty-Eighth Annual Meeting of The Southern Society for Philosophy and Psychology held in Asheville, North Carolina, April 29–31, 1956. The Duke University Departments of Philosophy and Psychology and the University of North Carolina Philosophy Department were hosts.

The following papers were included in the program:

D. C. Yalden-Thomson, "On the Word 'Aesthetic.'"
Edith Watson Schipper, "The Uses of Art in Plato's Republic."
Philip P. Hallie, "On Teaching Philosophical Aesthetics."
George Proctor, "The Relation of Scientific Objects to Sense-Experience."
Jason Xenakis, "Plato on Statement and Truth-Value."
Kenneth W. Spence, "The Empirical Basis and Theoretical Structure of Scientific Psychology." Reply by Herbert Hochberg.
George M. Van Sant, "A Proposed Property of Relations."
Panayot K. Butchvarov, "Wittgenstein, Whitehead, and the Theory of Relations."
Robert Roelofs, "The Specific Correlation of James' Psychology and His Pragmatic Analysis of Truth."
E. Maynard Adams, "The Rise and Fall of the Sense-Datum Theory."
Rubin Gotesky, "Ayer's Argument for the Existence of Other People's Experiences."
Peter A. Carmichael, "Asserting and Knowing."
Howard L. Parsons, "Freedom: Its Meaning and Use."
D. Maurice Allan, "The Levels of Coherence in Ethics and Their Inter-Relations."
Harold N. Lee, "Political Facts and Moral Values."
Kai E. Nielsen, "Moral and Non-Moral Good and the Function of Morality."
Robert C. Whittemore, "Hegel's 'System' and Kierkegaard's God."
Albert G. A. Balz, "Some Articles of Metaphysical Faith."
Edward G. Ballard, "Individual and Person."
Charles Hartshorne, R. A. Tsanoff, J. W. Oliver, "The Problem of the Self" (Symposium).

The new officers elected were: President, William S. Weedon (University of Virginia); Secretary, Wilse B. Webb (U. S. Naval School of Aviation); Treasurer, Sam C. Webb (Emory University); Member of the Council, Everett W. Hall (University of North Carolina).

The 1957 meeting will be held at Gatlinburg, Tennessee.

JOHN HERMAN RANDALL, JR., reviews

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